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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/629,006

07/29/2003

Paul Adams

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EXAMINER

LEE, KEVIN L

ART UNIT

PAPER NUMBER

3753

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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3 MONTHS

03/08/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/629,006

Applicant(s)

ADAMS ET AL.

Examiner

KEVIN L. LEE

Art Unit

3753

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 December 2006 and 28 February 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3, 5-7, 12-16, 22, 23, 25, 27-30, 34, 45-47 and 99-114 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 5-7, 12-16, 22, 23, 25, 27-29, 34, 45-47 and 99-114 is/are rejected.
- 7) ☒ Claim(s) 30 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

Applicant's amendments filed December 14, 2006 and February 28, 2007 have been fully considered by the examiner. In view of applicant's amendments and persuasive arguments, the prior rejections under 35 U.S.C. 112, 102 and 103 set forth in the prior Office action are hereby withdrawn. The drawing objection is also withdrawn in view of applicant's replacement drawing sheet filed with the amendment of December 14, 2006.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-3, 5-7, 13, 14, 22, 23, 25, 27-29, 34, 45, 46, 99-104 and 107-114 are rejected under 35 U.S.C. 102(e) as being anticipated by Soucy (U.S. Patent No. 7,093,623). The patent to Soucy discloses a fuel cell system comprising a fuel supply (10) and a fuel cell having an inlet opening (28) and a biased slidable inner body (32).

The fuel supply (10) includes a slidable inner body (20). The spring constants for the valve (20) is lower than the spring constant for the valve (32); see col. 2, lines 38-55.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 12 and 47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Soucy. In particular regard to claim 12, the spring constants of Soucy are substantially different. However, Soucy teaches that the spring constants are only "preferably" different; col. 2, line 51. It would have been an obvious design expedient to one of ordinary skill in the art at the time of the invention to modify the spring constants to be substantially the same so that the valve elements open at substantially the same time. In particular regard to claim 47, the fuel supply (10) is a cartridge or container. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the fuel cell system of Soucy so that the fuel supply is a fuel line to provide a large quantity of fuel for the fuel cell.

Claims 15, 16, 105 and 106 are rejected under 35 U.S.C. 103(a) as being unpatentable over Soucy in view of Powell et al (U.S. Patent No. 6,135,150). The valve components of Soucy do not have O-rings forming the sealing members. The patent to

Powell et al discloses providing O-rings (217, 218) as sealing members for the valves (216, 219), see Figure 1a. In view of the teaching of Powell et al, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the valve apparatus of Soucy to include O-rings to form replaceable valve seats for the valve members.

Claim 114 is rejected under 35 U.S.C. 103(a) as being unpatentable over Soucy in view of Kojak, III (U.S. Patent No. 4,672,998). The fuel supply of Soucy lacks having a removable covering member. The patent to Kojak, III teaches providing a removable covering member (122) for a male coupler (24), col. 4, lines 26-28. In view of the teaching of Kojak, III, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the valve apparatus of Soucy to include a removable covering member to protect the fuel supply coupler when the fuel supply coupler is not in use.

Claims 101-109 and 111-113 are rejected under 35 U.S.C. 103(a) as being unpatentable over Powell et al in view of Soucy. The patent to Powell et al discloses a valve coupling comprising a first valve component (201) and a second valve component (202), the first valve component having a spring (215) whose spring constant is lower than the spring constant of the spring (22) of the second valve component, col. 4, lines 9-18. The valve component of Powell et al is not connected to a fuel cell or a fuel supply. The patent to Soucy teaches connecting a valve coupling to a fuel supply and a

fuel cell; see col. 2, lines 38-55. In view of the teaching of Soucy, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the valve coupling of Powell et al to control the fluid flow of a fuel supply to a fuel cell.

Allowable Subject Matter

Claim 30 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.


The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The patent to Eggum (U.S. Patent No. 7,115,335) is cited for the additional showing of a valve coupling used in a fuel cell system.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KEVIN L. LEE whose telephone number is (571) 272-4915. The examiner can normally be reached on MONDAY-THURSDAY.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, ERIC KEASEL can be reached on (571) 272-4929. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

March 5, 2007


Kevin Lee
Primary Examiner